CLAIMS

What is claimed is:

1. An imager apparatus, comprising:

a pixel; and

a first filter positioned in an incident light path for a portion of said pixel, said filter being operable to alternate between transmitting and reducing incident light on said pixel portion.

2. The imager apparatus of claim 1, wherein said filter is actuable to block substantially all incident light on said pixel portion.

3. The imager apparatus of claim 2, wherein said filter comprises a ferroelectric liquid crystal filter.

4. The imager apparatus of claim 1, further comprising:

at least one additional filter positioned in an incident light path for a respective portion of said pixel and being operable to alternate between transmitting and reducing incident light on said respective portion of said pixel.

5. The imager apparatus of claim 4, wherein each additional filter is actuable to block substantially all incident light to respective pixel portions.

6. An imager system, comprising:

an array of pixels;

a light director positioned to direct light from an object onto said pixels;

a plurality of filters associated with each of said pixels, each of said filters being operable to alternate between transmitting and filtering said light for a respective portion of its associated pixel that is different from the pixel portion for each other filter associated with the same pixel; and

an operating system connected to operate the filters associated with each pixel in sequence to provide an image spatial resolution greater than without said filters.

7. The imager system of claim 6, wherein said filters are operable to block substantially all light from their respective pixel portions.

8. The imager system of claim 6, wherein said filters are operable to block substantially less than all light from their respective pixel portions.

9. The imager system of claim 6, wherein said operating system operates the filters of each pixel separately from the filters of the other pixels.

10. The imager system of claim 6, wherein said operating system concurrently operates the filters in groups of pixels.

11. The imager system of claim 6, wherein said filters are positioned adjacent their respective pixels.

12. The imaging system of claim 6, wherein said filters are positioned adjacent an object to be imaged.

13. A resolution enhancement method, comprising:

filtering incident light from an image to a first portion of a pixel in an imager;

reading out a first light indication from said pixel;

filtering incident light from the image to a second portion of said pixel; and

reading out a second light indication from said pixel so that said pixel can distinguish between two spatial regions on said image.

14. The method of claim 13, wherein said filtering comprises substantially blocking said light.

15. Method for scanning an object, comprising:

directing light from different locations of the object to different portions of a pixel;

alternately transmitting and at least partially blocking said light for said different pixel locations in sequence; and

reading out said pixel at different times corresponding to the transmission of said light to said different pixel portions.

16. The method of claim 15, wherein said pixel is in an array of pixels, further comprising directing light from different respective locations of said object to different portions of each of said pixels, alternately transmitting and at least partially blocking said light for said different pixel portions in sequence, and reading out said pixels so that each pixel can distinguish between more than one spatial region on said image.

17. The method of claim 16, wherein said light is substantially fully blocked for said different pixel locations.

18. The method of claim 16, wherein said light is alternately transmitted and at least partially blocked for each of said pixels separately.

19. The method of claim 16, wherein said light is alternately transmitted and at least partially blocked for groups of said pixels concurrently.